

## REMARKS

This is a full and timely response to the outstanding non-final Office Action mailed April 23, 2004. Upon entry of the amendments in this response, claims 2, 4, 6 - 8, 10 - 15, 18 and 21 remain pending. In particular, Applicants have amended claims 2, 4, 6, 7 and 21 and have canceled claims 3, 5 and 16 - 17 without prejudice, waiver, or disclaimer. Applicants have canceled claims 3, 5 and 16 - 17 merely to reduce the number of disputed issues and to facilitate early allowance and issuance of other claims in the present application. Applicants reserve the right to pursue the subject matter of these canceled claims in a continuing application, if Applicants so choose, and do not intend to dedicate the canceled subject matter to the public. Reconsideration and allowance of the application and presently pending claims are respectfully requested.

### Rejections Under 35 U.S.C. §102

The Office Action indicates that claims 2 - 5, 7 - 8 and 10 - 18 stand rejected under 35 U.S.C. §102(b) as being anticipated by *Thomas*. Applicants respectfully traverse the rejection.

With respect to claim 4, that claim recites:

4. A cable system comprising:  
*a cable having a conductor, a power layer and dielectric material, the conductor and power layer being embedded in and surrounded by the dielectric material*, the dielectric material being located at least partially between the conductor and the power layer, the conductor being operative to carry a signal, the power layer being operative as ground, the power layer being formed of a conductive material and having a first region and an adjacent second region, the first region including a greater amount of the conductive material than the second region such that the power layer is less resistant to bending along the second region than along the first region;  
the cable has a longitudinal axis; and  
the second region defines an axial bending region about which the power layer is less resistant to bending, the axial-bending region being angularly displaced with respect to the longitudinal axis of the cable;

***wherein the second region includes a recess defining an area of reduced thickness of the power layer.***  
(Emphasis Added).

Applicants respectfully assert that *Thomas* is legally deficient for the purpose of anticipating claim 4. Specifically, Applicants respectfully assert that *Thomas* does not teach or otherwise disclose at the “power layer being embedded and surrounded by the dielectric material.” Support for this limitation can be found in Applicants’ disclosure at, for example, FIG. 2 and the accompanying written description. As shown in FIG. 2, power layer 204 is embedded in and surrounded by the dielectric material 206. In particular, “[t]he interstices formed between the various conductors 202 and the power layer 204 may be filled by dielectric material 206, which can also form a protective exterior coating that surrounds the conductors 202 and the power layer 204.” (Specification at page 4, lines 21 – 24). For at least this reason, Applicants respectfully assert that the rejection of claim 4 is improper.

Additionally, claim 4 recites “wherein the second region includes a recess defining an area of reduced thickness of the power layer.” Applicants respectfully assert that *Thomas* also does not teach or otherwise disclose this limitation. Specifically, *Thomas* teaches a power layer formed of a perforated foil. Clearly, a perforation is not a recess. For at least this additional reason, Applicants respectfully assert that the rejection of claim 4 is improper and should be removed. Since claim 2 incorporates all the limitations of claim 4, Applicants respectfully assert that this claim also is in condition for allowance.

With respect to claim 7, that claim recites:

7. A cable system comprising:  
***a cable having a conductor, a power layer and dielectric material, the conductor and power layer being embedded in and surrounded by the dielectric material,*** the dielectric material being located at least partially between the conductor and the power layer, the conductor being operative to carry a signal, the power layer being operative as ground, the power layer being formed of a conductive material and having a first region and an adjacent second region, the first region including a greater amount of the

conductive material than the second region such that the power layer is less resistant to bending along the second region than along the first region;  
the cable has a longitudinal axis; and  
the second region defines an axial bending region about which the power layer is less resistant to bending, the axial-bending region being angularly displaced with respect to the longitudinal axis of the cable;  
***wherein the power layer is formed of interwoven strips of the conductive material.***  
(Emphasis Added).

Applicants respectfully assert that *Thomas* is legally deficient for the purpose of anticipating claim 7, because *Thomas* does not teach or otherwise disclose at least the features/limitations emphasized above in claim 7. Specifically, Applicants respectfully assert that *Thomas* does not teach or otherwise disclose “wherein the power layer is formed of interwoven strips of the conductive material.” In this regard, Applicants respectfully refer the Examiner’s attention to *Thomas*, column 5, lines 49 – 53, which discloses “[t]he ground plane layers 11 and 12 are formed either of perforated foil 19 or a solid foil of a conductive material, for example, copper or aluminum, and may be encapsulated or may further comprise dielectric film encapsulating material.” Applicants also respectfully refer the Examiner’s attention to *Thomas* at column 6, lines 37 – 39 which discloses “[d]ielectric layers 14 may be solid dielectric layers as illustrated in FIG. 1, may be perforated as illustrated in FIG. 3, or may be formed of woven material structure, for example.” Applicants respectfully assert that this appears to be the only disclosure in *Thomas* of a woven material; however, the cited passage of *Thomas* refers to the dielectric layers and not the power layer recited in Applicants’ claims. Therefore, Applicants respectfully assert that this teaching in *Thomas* is inapplicable for anticipating the structure recited in claim 7. Therefore, Applicants respectfully assert that the rejection of claim 7 is improper and that claim 7 is in condition for allowance. Since claim 8 is a dependent claim and incorporates all the features/limitations of claim 7, Applicants respectfully assert that this claim also is in condition for allowance.

Claim 14 recites:

14. A cable system comprising:  
a cable having a power layer operative as ground, the power layer being formed of a conductive material and including multiple first locations and multiple second locations, each of the first locations including an amount of conductive material greater than an amount of conductive material included in the each of the second locations such that the power layer is more resistant to bending at the first locations than at the second locations;  
*wherein the power layer is formed of interwoven strips of the conductive material.*  
(Emphasis Added).

Applicants respectfully assert that *Thomas* is legally deficient for the purpose of anticipating claim 14, because *Thomas* does not teach or otherwise disclose at least the features/limitations emphasized above in claim 14. Specifically, Applicants respectfully assert that *Thomas* does not teach or otherwise disclose “wherein the power layer is formed of interwoven strips of the conductive material.” In this regard, Applicants respectfully refer the Examiner’s attention to *Thomas*, column 5, lines 49 – 53, which discloses “[t]he ground plane layers 11 and 12 are formed either of perforated foil 19 or a solid foil of a conductive material, for example, copper or aluminum, and may be encapsulated or may further comprise dielectric film encapsulating material.” Applicants also respectfully refer the Examiner’s attention to *Thomas* at column 6, lines 37 – 39 which discloses “[di]electric layers 14 may be solid dielectric layers as illustrated in FIG. 1, may be perforated as illustrated in FIG. 3, or may be formed of woven material structure, for example.” Applicants respectfully assert that this appears to be the only disclosure in *Thomas* of a woven material; however, the cited passage of *Thomas* refers to the dielectric layers and not the power layer recited in Applicants’ claims. Therefore, Applicants respectfully assert that this teaching in *Thomas* is inapplicable for anticipating the structure recited in claim 14. Therefore, Applicants respectfully assert that the rejection of claim 14 is improper and that claim 14 is in condition for allowance. Since claims 10 – 13 and 15 are dependent claims that incorporate all the

features/limitations of claim 14, Applicants respectfully assert that these claims also are in condition for allowance.

Claim 18 recites:

18. A method for forming a cable system comprising:  
*providing a power layer including at least a first region of reduced material content defined by at least one recess; and*  
forming a flex cable with the power layer.  
(Emphasis Added).

Applicants respectfully assert that *Thomas* does not teach or otherwise disclose at least the features emphasized above in claim 18. Specifically, Applicants respectfully assert that *Thomas* does not teach or otherwise disclose at the “providing a power layer including at least a first region of reduced material content defined by at least one recess.” *Thomas* teaches a power layer formed of a perforated foil. Clearly, a perforation is not a recess. For at least this reason, Applicants respectfully assert that the rejection of claim 18 is improper and should be removed.

### **Rejections under 35 U.S.C. §103**

The Office Action indicates that claims 6 and 21 stand rejected under 35 U.S.C. 103(a) as being unpatentable over *Thomas* in view of *Mochizuki*. Applicants respectfully traverse the rejection.

As an initial matter, Applicants respectfully assert that *Mochizuki* may not be properly combined with *Thomas* because *Mochizuki* involves a structure and method of mounting a branch connector to a flat circuit. Since *Mochizuki* does not involve a flex cable, as recited in Applicants’ claims, Applicants respectfully assert that the combination is improper and, therefore, the rejection is legally deficient for at least this reason.

With respect to the rejection of claim 6, Applicants respectfully assert that claim 6 is a dependent claim that incorporates all the features/limitations of claim 4, the allowability of

which was discussed above. Since *Mochizuki* does not teach or reasonably suggest at least the features/limitations that are lacking in *Thomas*, Applicants respectfully assert that the combination of *Mochizuki* and *Thomas* is legally deficient for the purpose of rendering obvious the features/limitations of claim 6. Therefore, Applicants respectfully assert that claim 6 is in condition for allowance.

With respect to claim 21, that claim recites:

21. A method for electrically interconnecting components comprising:  
***providing a flex cable having a power layer formed of interwoven strips of conductive material;***  
providing a first component and a second component that are to be electrically interconnected to each other; and  
electrically interconnecting the first component and the second component with the flex cable.  
(Emphasis Added).

Applicants respectfully assert that *Thomas* and *Mochizuki*, either individually or in combination, are legally deficient for the purpose of rendering obvious claim 21.

Specifically, Applicants respectfully assert that neither *Thomas* nor *Mochizuki* teaches or reasonably suggests at least “providing a flex cable having a power layer formed of interwoven strips of conductive material.” Therefore, Applicants respectfully assert that the rejection of claim 21 is improper and that claim 21 is in condition for allowance.

#### **Cited Art Made of Record**

The cited art made of record has been considered, but is not believed to affect the patentability of the presently pending claims.

## CONCLUSION

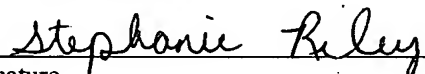
In light of the foregoing amendments and for at least the reasons set forth above, Applicant respectfully submits that all objections and/or rejections have been traversed, rendered moot, and/or accommodated, and that the now pending claims 2, 4, 6 - 8, 10 - 15, 18 and 21 are in condition for allowance. Favorable reconsideration and allowance of the present application and all pending claims are hereby courteously requested. If, in the opinion of the Examiner, a telephonic conference would expedite the examination of this matter, the Examiner is invited to call the undersigned attorney at (770) 933-9500.

Respectfully submitted,

  
\_\_\_\_\_  
M. Paul Qualey, Reg. No. 43,024

**THOMAS, KAYDEN,**  
**HORSTEMEYER & RISLEY, L.L.P.**  
Suite 1750  
100 Galleria Parkway N.W.  
Atlanta, Georgia 30339  
(770) 933-9500

I hereby certify that this correspondence is being deposited with the United States Postal Service as first class mail, postage prepaid, in an envelope addressed to: Assistant Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450, on 5/10/04.

  
\_\_\_\_\_  
Signature